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ABSTRACT

The issue of whether enough qualified students will seek enrollment at the Univesity of California at San Diego (UCSD) through the end of the century to support the campus's plan for growth, the expansion for staff, and facilities that such growth entails is discussed. Five sections provide an introduction and focus on: demography (trends and projections); Black and Hispanic eligibility (developing assumptions for a key variable); three enrollment models; and conclusions and caveats. The study indicates the following: UCSD's enrollment plan appears reasonable, at least in the short run; given its historical patterns of participation and continuation, the changing ethnic mix of the state's population should have little effect on the campus's enrollment potential; if the Hispanic population grows as predicted, and if Black and Hispanic eligibility remain at current levels, UCSD could still come within 6% of its enrollment target at the turn of the century; and unless the academic preparation of underrepresented minority students increases dramatically, over time an increasing number of students will be admitted to UCSD from the lower end of the eligibility pool. It is suggested that the surest foundation upon which to base long term growth in the university is to seek to improve the academic preparation and performance of underrepresented minority students. Contains 3 figures and 12 tables. (SM)

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Through a Glass, Darkly; Forecasting UCSD's Enrollment Potential Through the Turn of the Century

Michael Evans-Layng

May 1986

Campus Planning Office
Analytical Studies
University of California, San Diego

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EXECUTIVE SUMMARY

This study explores the issue of whether or not enough qualified students will seek to enroll at UCSD through the end of the century to support the campus's plan for growth, and the expansion of faculty, staff, and facilities that such growth entails.

Forecasting enrollment potential necessarily entails making many assumptions about such things as the number of high school graduates in a given year, the eligibility of high school graduates to enroll in the university, the rate at which eligible students actually enroll, and the rate at which enrolled students persist in their studies. The demographic, social, and economic realities that underlie these assumptions are complex and fluid, which only compounds the difficulty of predicting their effects even in the short term, let alone over a decade and a half. For example, as recently as 1981 one plausible enrollment model suggested that UCSD enrollments might drop as much as 5% by 1985; they rose 30% instead.

Keeping these uncertainties in mind, this study found that:

- UCSD's enrollment plan appears reasonable, at least in the short run.
- Given UCSD's historical patterns of participation and continuation, the changing ethnic mix of the state's population should have little effect on the campus's enrollment potential.
- If the Hispanic population grows as predicted over the next 15 years, and the percentage of high school graduates from this group eligible for regular UC admission increases only slightly, UCSD should have no significant difficulty in fulfilling its enrollment plan.
- If the Hispanic population grows as predicted, and if Black and Hispanic eligibility remain at current levels, UCSD could still come within 6% of its enrollment target at the turn of the century.
- Unless the academic preparation of underrepresented minority students improves dramatically, over time an increasing number of students will be admitted to UCSD from the lower end of the eligibility pool. This prospect has important implications for the faculty and student service sectors of the campus as they address the undergraduate education mission of the university.

The study concludes with the suggestion that the surest foundation upon which to base long term growth in the university is to seek to improve the academic preparation and performance of underrepresented minority students.

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INTRODUCTION: Through a Glass, Darkly

"Demography is destiny."[1] Or is it? According to one model contained in a report published by the UCSD Planning Office in 1981, the campus might have expected, on the basis of historical demographic trends and participation rates, to experience a 5.5% decline in undergraduate enrollment by 1985.[2] Instead, enrollment has risen almost 30% (Table 1), removing the spectre of retrenchment that loomed over planning efforts from the mid-1970's to the early 1980's.

But, even though expansion is generally more welcome than decline, the campus's continuing growth has put tremendous pressure on UCSD's human and physical resources. Consequently, the experience of the last several years spurred the development of a new enrollment plan, which is intended to form the basis for campus academic and capital planning. The new plan calls for uninterrupted growth of the undergraduate student body at UCSD from 11,368 in 1984-85 to 17,500 in 2000-01, an increase of almost 54% (Table 2).

The fact that earlier models yielded underestimates has nothing to do with the methods employed and everything to do with the difficulty of predicting the behavior of human beings, especially teenagers. Or, more formally, "Enrollment forecasts are based on judgments about the future behavior of two independent phenomena--demographic change and the propensity to enroll."[3] Specifically, during the last decade the numbers of qualified high school students enrolling in the University of California ("participation") increased significantly, from 5.1% of all high school graduates in 1974 to 7.5% in 1984 (Table 3). By itself, this 47% increase in participation more than compensated for an 11% decline in the number of high school graduates during the same period

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Table 1
UCSD Enrollment History,
Three-Quarter Average Headcount,
1980-81 to 1984-85, Indexed To 1980-81

	1980-81	1981-82	1982-83	1983-84	1984-85
General Campus					
Undergraduate	8,786	9,649	10,200	10,720	11,368
	(1.00)	(1.10)	(1.16)	(1.22)	(1.30)
Graduate	1,088	1,143	1,214	1,254	1.303
	(1.00)	(1.05)	(1.12)	(1.15)	(1.20)
SIO	186	186	187	179	175
	(1.00)	(1.00)	(1.01)	(.96)	(.94)
SOM	1,031	1,068	1.041	1,049	1,055
	(1.00)	(1.04)	(1.01)	(1.02)	(1.02)
Total	11,091	12,046	12,642	13,202	13,901
	(1.00)	(1.09)	(1.14)	(1.19)	(1.25)

Source: UCSD Campus Planning Office

Planning Document

Campus Planning Office
Analytical Studies
January 9, 1986

Table 2
UCSD ENROLLMENT PLAN PROJECTIONS,
THREE-QUARTER AVERAGE HEADCOUNT,
1983-84 to 2000-01

	Actual 1983-84	Actual 1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Gen. Campus							
UG	10,720	11,368	11,850	12,300	12,600	12,900	13,200
Grad	1,254	1,303	1,450	1,515	1,615	1,715	1,815
Sub-Total	11,974	12,671	13,300	13,815	14,215	14,615	15,015
SIO	179	175	175	185	185	185	185
SOM	1,049	1,055	1,065	1,080	1,100	1,115	1,125
GSIRPS*	0	0	0	0	48	144	240
Total	13,202	13,901	14,540	15,080	15,548	16,059	16,565

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Gen Campus							
UG	13,500	13,800	14,200	14,600	15,000	15,350	15,750
Grad.	1,915	2,015	2,115	2,215	2,315	2,415	2,515
Sub-Total	15,415	15,815	16,315	16,815	17,315	17,765	18,265
SIO	185	185	185	185	185	185	185
SOM	1,125	1,125	1,125	1,125	1,125	1,125	1,125
GSIRPS	336	400	400	400	400	400	400
Total	17,061	17,525	18,025	18,525	19,025	19,475	19,975

	1997-98	1998-99	1999-2000	2000-2001
Gen. Campus				
UG	16,150	16,550	17,000	17,500
Grad.	2,615	2,715	2,815	2,915
Sub-Total	18,765	19,265	19,815	20,415
SIO	185	185	185	185
SOM	1,125	1,125	1,125	1,125
GSIRPS	400	400	400	400
Total	20,475	20,975	21,525	22,125

*Graduate School of International Relations and Pacific Studies

Source: UCSD Campus Planning

Campus Planning Office
Analytical Studies
March 26, 1986

Table 3
California High School Graduates, UC Enrollments,
and UC Participation Rates, 1974 to 1984,
Indexed to 1974

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
CA H.S. Grads	289,714	293,941	289,454	285,360	283,841	278,548	270,971	260,229	265,924	262,160	257,633
	(1.00)	(1.01)	(1.00)	(.98)	(.98)	(.96)	(.94)	(.90)	(.92)	(.90)	(.89)
New UC Enrlmnts	14,775	15,578	14,762	14,838	15,611	16,155	16,258	16,654	17,019	18,351	19,322
	(1.00)	(1.05)	(1.00)	(1.00)	(1.06)	(1.09)	(1.10)	(1.13)	(1.15)	(1.24)	(1.31)
Part. Rate	5.1	5.3	5.1	5.2	5.5	5.8	6.0	6.4	6.4	7.0	7.5
	(1.00)	(1.04)	(1.00)	(1.02)	(1.08)	(1.14)	(1.18)	(1.25)	(1.25)	(1.37)	(1.47)

Source: California College-Going Rates 1984 Update, CPEC

(Table 3, Figure 1). Moreover, once enrolled, students are tending to persist more than before ("continuation"). Since 1977-78, UCSD's Fall-to-Fall continuation rate has risen from .731 to .844, an increase of 15% (Figure 2). Continuation rates for the other UC general campuses have followed the same trend (Table 4).[4] Demography is not necessarily destiny after all.

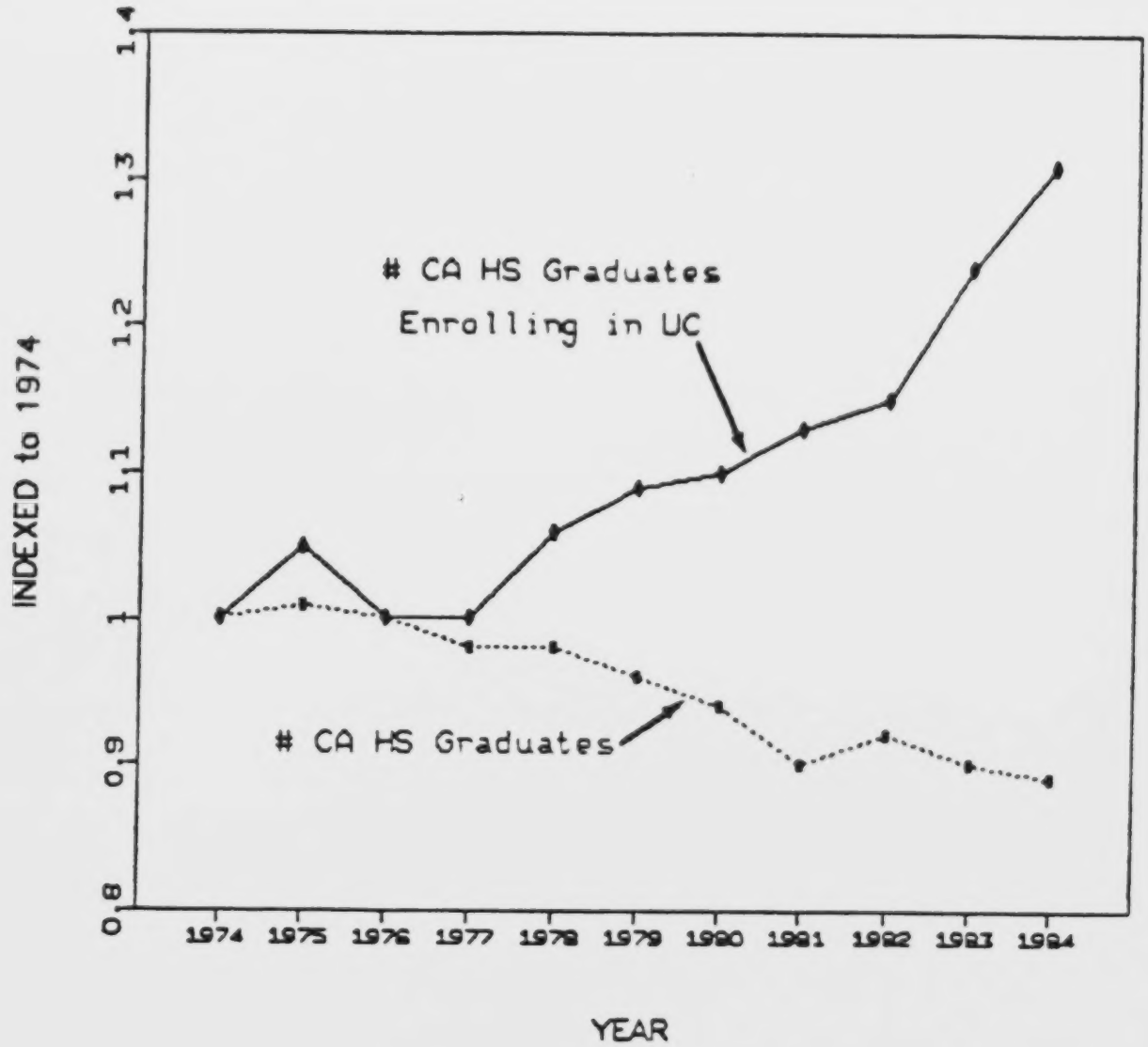
In retrospect, these increments in participation and continuation make a certain amount of sense: in a time where students believe that a high-quality college education represents an important credential for access to well-paying jobs, and parents are making cost/benefit analyses of higher education more closely than ever before, the UC system represents more educational bang for one's buck than any other university in the state. But hindsight, while useful, does not eliminate the need for foresight; the nature of planning requires that we attempt to see into the future, however dimly. Thus, difficulties notwithstanding, we must hazard some answers to questions about the next decade and beyond.

For instance, will enough qualified students seek to enroll at UCSD between now and the end of the century to support the campus's plans for growth, and the expansion of faculty, staff, and facilities that such growth entails? As it turns out, the short answer to that question is a cautious "Yes." The remainder of this report is devoted to a closer examination of the issue of UCSD's enrollment potential.

DEMOGRAPHY: Trends and Projections

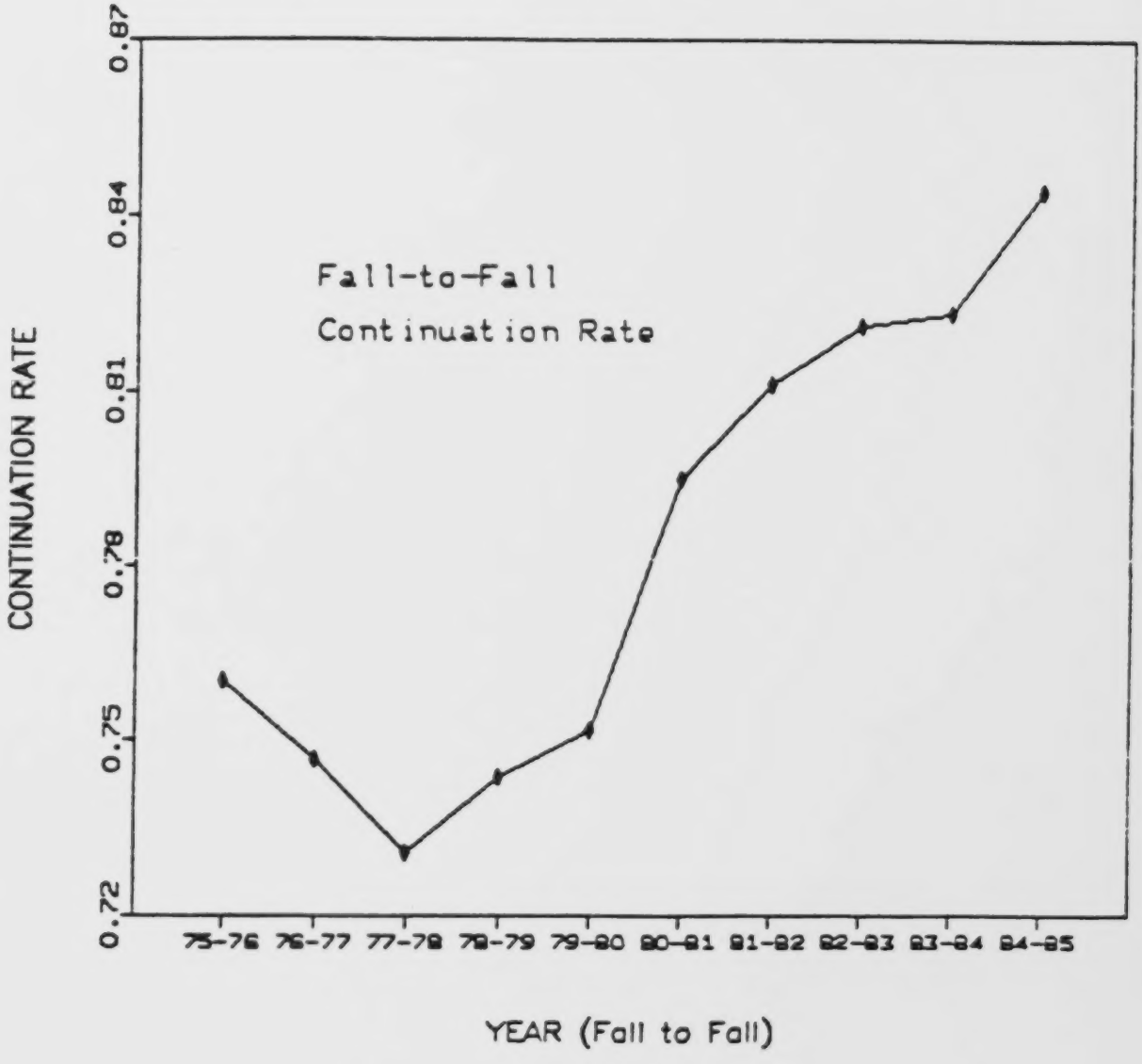
California is growing. Table 5 indicates that the total population for the state should grow by almost a third, from 23,770,978 in 1980 (the time of the last decennial census) to 31,413,955 in the year 2000.

Figure 1
Number of California High School Graduates Enrolling in UC Compared with the Total Number of California High School Graduates the Same Year, 1974 to 1984, Indexed to 1974



Source: California College-Going Rates 1984 Update, CPEC

Figure 2
UCSD Fall-to-Fall Continuation Rates,
1975-76 to 1984-85*



Source: Campus Planning Office

*See explanatory note #4 on page 27

Table 4
ADJUSTED UC FALL-TO-FALL CONTINUATION RATES,
FALL 1976 THROUGH FALL 1983*

Campus	F76-77 Rate	F77-78 Rate	F78-79 Rate	F79-80 Rate	F80-81 Rate	F81-82 Rate	F82-83 Rate	F83-84 Rate
San Diego	.763	.760	.758	.776	.819	.836	.851	.845
Berkeley	.868	.890	.898	.911	.918	.920	.919	.926
Davis	.860	.853	.857	.877	.876	.900	.907	.913
Irvine	.795	.766	.781	.798	.820	.791	.799	.835
Los Angeles	.817	.820	.834	.845	.862	.866	.901	.895
Riverside	.771	.754	.777	.792	.792	.796	.799	.809
Santa Barbara	.793	.794	.809	.829	.819	.845	.853	.867
Santa Cruz	.758	.754	.759	.780	.815	.783	.796	.804
UC Average	.818	.818	.829	.845	.857	.861	.873	.880

Source: UC Statistical Summary of Students

*See explanatory note #4 on page 27

Note: Continuation Rate = $\frac{\text{Continuing/Returning Fall}}{\text{Total Previous Fall + New Previous Winter and Spring - Degrees Previous Year}}$

Table 5
Total California Population and Population in 15-24 Age Group, in UCSD Primary Feeder Counties,
Actual 1980, Projected in 5 Year Intervals to 2000,
Indexed to 1980

Counties	1980 Population	1980 Index	1985 Population	1985 Index	1990 Population	1990 Index	1995 Population	1995 Index	2000 Population	2000 Index
San Diego										
Total	1,874,792	1.00	2,135,872	1.14	2,404,716	1.28	2,639,483	1.41	2,848,974	1.52
15-24	412,294	1.00	424,809	1.03	415,131	1.01	431,600	1.05	480,894	1.17
% of Co. Total	22		20		17		16		17	
Los Angeles										
Total	7,490,473	1.00	7,891,318	1.05	8,127,411	1.09	8,326,468	1.11	8,474,217	1.13
15-24	1,414,506	1.00	1,336,769	.95	1,187,854	.84	1,167,560	.83	1,278,991	.90
% of Co Total	19		17		15		14		15	
Orange/Santa Clara										
Total	3,241,307	1.00	3,512,656	1.08	3,768,042	1.16	4,002,678	1.23	4,197,925	1.30
15-24	651,699	1.00	610,656	.94	538,715	.83	510,114	.78	570,780	.88
% of Co Total	20		17		14		13		14	
Total Primary Feeder Co.										
Total	12,606,622	1.00	13,539,849	1.07	14,300,172	1.13	14,968,632	1.19	15,521,119	1.23
15-24	2,478,509	1.00	2,372,237	.96	2,141,703	.86	2,109,277	.85	2,330,668	.94
% of Co Total	20		18		15		14		15	
Rest of California										
Total	11,164,406	1.00	12,457,875	1.12	13,689,529	1.23	14,850,986	1.33	15,892,839	1.42
15-24	2,056,167	1.00	2,043,005	.99	2,141,700	1.04	2,020,858	.98	2,318,651	1.13
% R/CA Total	18		16		16		14		15	
Total California										
Total	23,770,978	1.00	25,997,721	1.09	27,989,698	1.18	29,819,615	1.25	31,413,955	1.32
15-24	4,534,666	1.00	4,415,239	.97	4,056,478	.90	4,130,132	.91	4,649,396	1.03
% of CA Total	19		17		14		14		15	

Source: CPEC, Population and Enrollment Trends: 1985-2000, December 1984

San Diego is one of the fastest growing areas in the state; total population for the county should increase by over half, from 1,874,792 in 1980 to 2,848,974 at the turn of the century.

However, the projections for the 15 to 24 age group, the cohort that includes the vast majority of UC students, are more complicated (Table 5). In San Diego county, the absolute size of this group increases between now and the turn of the century, except for a slight decline in the late 1980's and early 1990's. In 1990, at the bottom of this decline, the absolute size of the cohort is still larger than in 1980, 415,131 versus 412,294, even though its size as a percentage of the total county population as a whole is much smaller, 17% versus 22%. Despite the increase in absolute size, total population growth in the county is projected to be such that the relative size of the 15-24 age group declines steadily between 1980 and 1995, from 22% of the county total to 16%. However, the relative size of this age group should begin to grow by the end of the century.

In Los Angeles, Orange, and Santa Clara counties--which, together with San Diego, are considered UCSD's primary "feeder" counties because they account for over 70% of the campus's new freshmen--both the absolute and relative size of the 15 to 24 cohort decreases until 1995, when it begins to increase. From 1980 to 1995, the net effect of these changes for all the primary feeder counties taken collectively is an absolute and relative decline in this age cohort. Note that, during the interval from 1980 to 1985, UCSD's enrollments rose despite the shrinking of the 15 to 24 age group. This is not surprising; high school graduates are members of this group, and we have already seen evidence of the capacity of increased participation and continuation to

overwhelm the negative effects that we would expect demographic decline to have on university enrollments.

California's ethnic profile is also changing dramatically. Tables 6 & 7 depict population projections by the Center for Continuing Study of the California Economy for different ethnic groups. Between now and the year 2000, California's Hispanic population will grow anywhere from 27% to 46%, increasing from roughly a fifth of the state's population (19.2%) to a quarter or more (24.4% to 28.1%). Much of this growth will take place in the 0-14 age group; by the year 2000, almost a tenth of California's total population could consist of Hispanics 14 and under, up from a twentieth in 1980. The percentage of Asians, Filipinos, and Pacific Islanders could increase by half, rising from 6.7% to 10.0% of the population. The proportion of Blacks should remain fairly constant, at around 7.5%, or decrease slightly, to 7.1%. The proportion of non-Hispanic Whites could decline by anywhere from 12% to 17%, from two thirds of the total population to slightly over half.

Table 8 shows the percentage of ethnic enrollments in 12th and 6th grade and kindergarten for 1979 and 1984. In 1984, almost a third of the state's kindergarten students, the high school class of 1997-98, were Hispanic. In 1984-85, 18.8% of California's twelfth graders were Hispanic, compared to 15.8% in 1979, an increase of almost 20%. The proportion of Asian and Filipino twelfth graders has grown even more, from 5.8% in 1979 to 9.4% in 1984-85, an increase of over 60%.

Table 9 shows Department of Finance (DOF) Population Research Unit forecasts of public high school graduates from 1985-86 to 1994-95 and, based on the DOF projections, UCSD Planning Office extrapolations from 1995-96 to 2000-01. The DOF predicts that the number of public high

Table 6
California Hispanic Population as Percent of Total Population,
By Major Age Group, 1980-2000

	Lower Alternative				
	1980	1985	1990	1995	2000
0-14	26.6	31.1	31.1	30.9	31.0
15-64	18.4	19.3	20.8	22.9	24.9
65+	7.4	7.8	8.7	10.2	11.9
Total Population	19.2	20.6	21.7	23.2	24.4

	Higher Alternative				
	1980	1985	1990	1995	2000
0-14	26.6	32.2	33.3	34.5	35.4
15-64	18.4	20.3	22.8	25.6	28.3
65+	7.4	7.9	8.9	10.6	12.5
Total Population	19.2	21.6	23.6	25.9	28.1

Source: Projections of Hispanic Population for California, 1985-2000
Center for Continuing Study of the California Economy, 1982

Table 7
California Percent Distribution of Total Population
By Major Population Group 1980-2000

	Lower Alternative				
	1980	1985	1990	1995	2000
Hispanic	19.2	20.7	21.7	23.2	24.4
Non-Hispanic White	66.6	64.2	62.5	60.2	58.2
Black	7.5	7.6	7.7	7.6	7.6
Asian and Other	6.7	7.5	8.1	8.8	9.8
Total Population	100.0	100.0	100.0	100.0	100.0

	Higher Alternative				
	1980	1985	1990	1995	2000
Hispanic	19.2	21.6	23.6	25.9	28.1
Non-Hispanic White	66.6	63.2	60.6	57.6	54.8
Black	7.5	7.4	7.4	7.2	7.1
Asian and Other	6.7	7.8	8.5	9.3	10.0
Total	100.0	100.0	100.0	100.0	100.0

Source: Projections of Hispanic Population for California, 1985-2000
Center for Continuing Study of the California Economy, 1982

Table 8
California Public School Enrollments in Grades K, 6, and 12,
by Ethnicity, Fall 1979 and Fall 1984, in Percents

Ethnic Group	Kindergarten			Grade 6			Grade 12		
	1979	1984	% Chg.	1979	1984	% Chg.	1979	1984	% Chg.
White	52.8	49.6	- 6.1	60.2	51.1	-15.1	68.0	61.9	- 9.0
Hispanic	31.5	32.7	3.8	23.0	29.2	27.0	15.8	18.8	19.0
Black	9.2	9.3	1.1	10.0	9.6	- 4.0	9.6	9.0	- 6.7
Asian/ Filipino	5.8	7.8	34.5	5.8	9.2	58.6	5.8	9.4	62.1
American Indian	0.7	0.6	-14.3	1.1	0.9	-18.2	0.8	0.9	12.5

Sources: 1979, California State Department of Finance, Graded Enrollment by Ethnicity, issued 1980; 1984, California State Department of Education, Racial or Ethnic Distribution of Staff and Students in California Public Schools, issued 1985.

Table 9
California Public High School Graduates
in UCSD Primary Feeder Counties, Projected
1985-86 to 1994-95, Estimated 1995-96 to 1999-2000,
Total Indexed to 1985-86

Public High School	Actual 1984-85	1985-86	1986-87	Projected by DOF 1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
San Diego	19,262	19,711	20,949	21,872	21,298	20,198	19,596	20,279	20,189
Los Angeles	67,977	69,602	74,017	75,199	73,011	69,405	69,359	71,558	73,524
Orange/ Santa Clara	37,348	37,424	38,629	39,397	37,330	34,089	32,679	32,501	32,494
Rest of California	114,352	116,195	121,254	127,083	124,203	117,672	115,045	117,835	121,280
Total California	238,939	242,932	254,849	263,551	255,842	241,355	236,679	242,173	247,487
Index	1.00	1.02	1.07	1.10	1.07	1.01	.99	1.01	1.04

	Proj. by DOF 1993-94	1994-95	Extrapolated by Campus Planning Office* 1995-96	1996-97	1997-98	1998-99	1999-2000
San Diego	20,787	22,107	22,737	23,367	23,997	24,627	25,257
Los Angeles	75,681	77,111	79,049	80,987	82,925	84,863	86,801
Orange/ Santa Clara	32,407	33,125	33,236	33,347	33,458	33,569	33,680
Rest of California	125,246	133,754	138,431	143,108	147,785	152,462	157,139
Total California	254,121	266,097	273,451	280,805	288,159	295,513	302,867
Index	1.06	1.11	1.14	1.18	1.21	1.24	1.27

*Extrapolations based on the average increase of the previous five years (1990-91 to 1994-95)

Source: California Department of Finance, Population Research Unit, February 1986; UCSD Campus Planning Office

school graduates will increase 9.5% between now and 1994-95, rising from 242,932 to 266,097. If the average yearly rate of increase persists after that, an assumption supported by the projected increase in 15-24 year old age group (Table 5), the Planning Office estimates that there will be more than 300,000 public high school graduates in California at the turn of the century, an increase of 27% over present levels. Beginning in 1988 and continuing through 1990-91, the Research Unit foresees declines in the numbers of high school graduates in all of UCSD's primary feeder counties and in the state as a whole. Even at their lowest, however, the total of public high school graduates statewide should be only 1% lower than in 1984-85, and will remain above the 1984-85 level in San Diego and Los Angeles counties.

Public high school graduates are of particular interest not only because they constitute the bulk of incoming freshmen, but also because private high school graduates, out-of-state, foreign and advanced standing transfer students have had a relatively constant proportional relationship to the number of public high school graduates coming to the campus (averaging .35 private high school graduate, out-of-state, or foreign student/public high school graduate; .37 advanced standing transfer student/public high school graduate). Therefore, approximating total UCSD enrollments in any given year on the basis of the number of public high school graduates is relatively straightforward.

BLACK AND HISPANIC ELIGIBILITY: Developing Assumptions for a Key Variable

Table 10 shows the results of the last two eligibility studies undertaken by the state, one in 1975 and one in 1985. However, the 1985 California Postsecondary Education Commission (CPEC) study of 1983 eligibility rates noted that the approach used in the 1975 UC study by

Table 10
Percentage of California High School Graduates Eligible for UC Admission

Year	Black	Hispanic	Asian	White	Total
1975	5.0	4.7	39.0	16.5	14.8
1983	3.6	4.9	26.0	15.5	13.2

Sources: Haycock, K. Beyond High School Graduation: Who Goes to College? UC, 1978. California Postsecondary Education Commission, 1985.

Haycock was different enough that comparisons between the two must be made with extreme caution. Specifically, one should not draw conclusions about the apparent decline in Black eligibility. Whichever study one takes as a benchmark, it is abundantly clear that the percentage of Black and Hispanic high school graduates eligible for admission to the University of California is disturbingly low: 3.6% and 4.9% respectively, in the case of the most recent study.

Although these low eligibility rates have hampered the university's efforts to reflect the state's ethnic diversity more closely, they have thus far not had a negative effect on overall enrollments. As noted above, increases in participation and continuation over the last decade have worked together to mitigate the decline in UC enrollments foreseen as a function of the decrease in high school graduates; the increases have also mitigated the potential negative effects on UC enrollments of the lower eligibility rates of Black and Hispanic high school graduates. Whether or not this situation will persist is open to conjecture. Given the apparent improvement in Hispanic eligibility between 1975 and 1983, the increased concern for elementary and secondary education in the state, and the growing economic and political importance of minority groups in the state, it seemed reasonable to suppose for the purposes of this study that Black and Hispanic eligibility rates would at least remain constant at their 1983 levels, and maybe even increase slightly. In light of the university's long-standing commitment to affirmative action, there is good reason to think that any increase in Black and Hispanic eligibility for UC admission would also yield some improvement in participation and persistence in unversity study, a development which would, of course, add to the overall upward pressure

on enrollments. The enrollment potential models described below reflect these assumptions about minority eligibility.

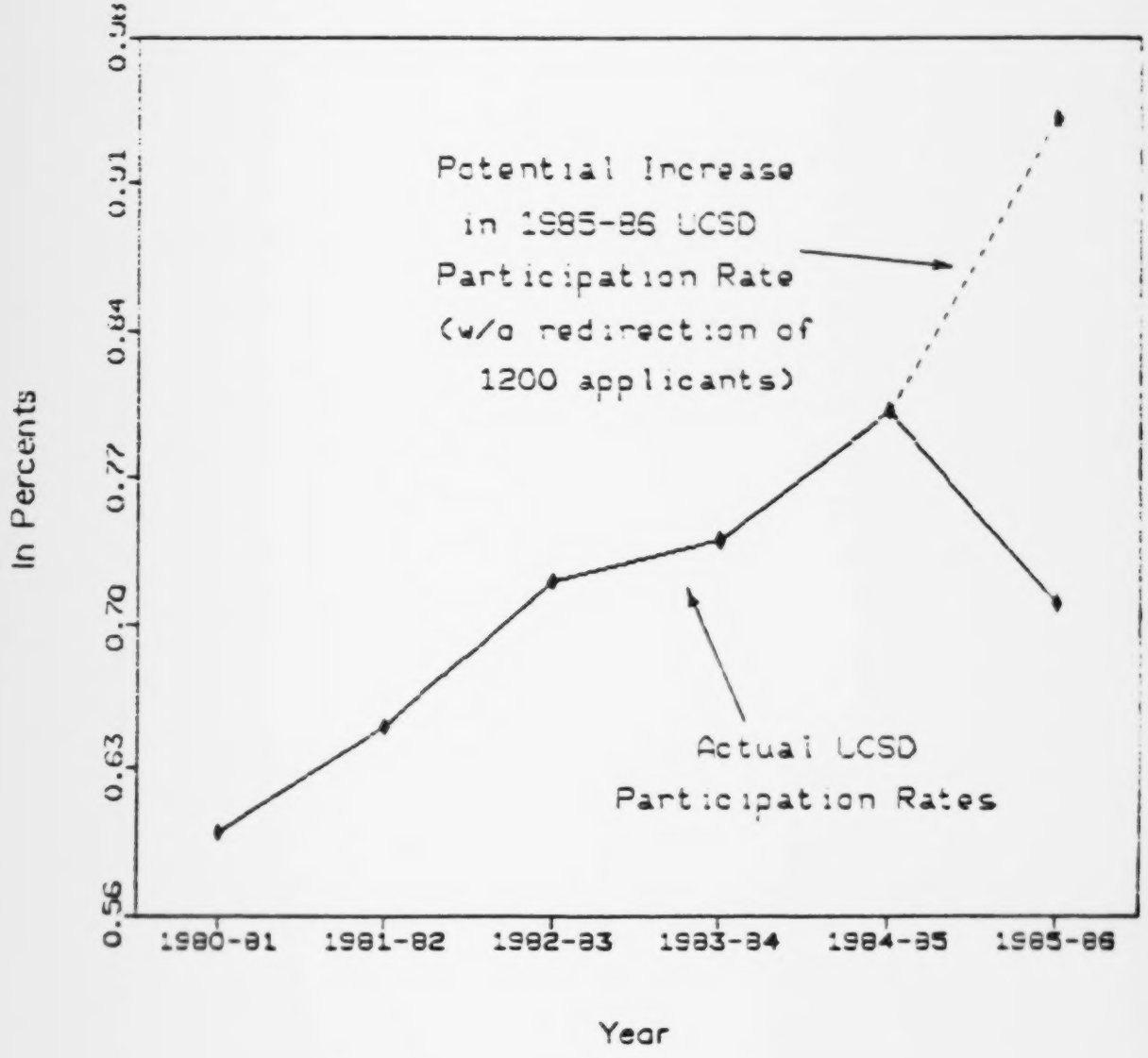
THREE ENROLLMENT MODELS

Table 11 displays the impact of three different sets of assumptions about ethnic distribution and eligibility rates on projections of UCSD's enrollment potential.

Before proceeding, a brief discussion of one of the basic assumptions of the following calculations is called for. The participation rate used in all three models was calculated as if UCSD had not redirected 1200 eligible applicants for the 1985-86 school year (Figure 3). Based on historical admission-to-registration rates, an additional 1200 admissions would probably have yielded around 600 registered students. These 600 "potentially registered" students represent unsatisfied--but nevertheless actual--demand for an education at UCSD. When included with the campus's actual Fall 1985 enrollments, and distributed according to the ethnic breakdown of the entering class, the resulting participation rates reflect UCSD's enrollment potential more accurately than if the effects of redirection had not been taken into account.

Model A holds the campus continuation rate and ethnic distribution of public high school graduates constant at 1984-85 levels, assumes constant 1983 eligibility rates, and holds participation rates (calculated as discussed above) constant at 1985-86 levels. The result is projected enrollment potential that is consistently above the enrollment plan, with no decline resulting from the dip in the number of public high school graduates that will probably occur in the late 1980's and early 1990's. In this model, the enrollment potential of

Figure 3
Percent of California Public High School Graduates
at UCSD (Participation Rate), 1980-81 to 1985-86



Source: Campus Planning Office

Table 11
Comparison of Three Sets of Three-Quarter Average Undergraduate Enrollment Projections for UCSD, from 1985-86 to 2000-01, That Make Different Assumptions About Ethnic Mix and Eligibility, Indexed to Enrollment Plan

	1985-86	1986-87	1986-88	1988-89	1989-90	1990-91	1991-92	1992-93
Enrollment Plan								
Enrollment	11,850	12,300	12,600	12,900	13,200	13,500	13,800	14,200
(Index)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Model A*								
Enrollment	12,461	13,380	14,293	15,131	15,645	15,808	15,845	15,975
(Index)	(1.05)	(1.09)	(1.13)	(1.17)	(1.19)	(1.17)	(1.15)	(1.13)
Model B**								
Enrollment	12,270	13,063	13,772	14,336	14,660	14,679	14,594	14,590
(Index)	(1.04)	(1.06)	(1.09)	(1.11)	(1.11)	(1.09)	(1.06)	(1.03)
Model C***								
Enrollment	12,270	13,126	13,954	14,675	15,113	15,212	15,190	15,247
(Index)	(1.04)	(1.07)	(1.11)	(1.14)	(1.14)	(1.13)	(1.10)	(1.07)

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-20001
Enrollment Plan								
Enrollment	14,600	15,000	15,350	15,750	16,150	16,550	17,000	17,500
(Index)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Model A*								
Enrollment	16,119	16,333	16,690	17,075	17,479	17,899	18,331	18,771
(Index)	(1.10)	(1.09)	(1.09)	(1.08)	(1.08)	(1.08)	(1.08)	(1.07)
Model B**								
Enrollment	14,646	14,747	14,954	15,198	15,466	15,777	16,116	16,476
(Index)	(1.00)	(.98)	(.97)	(.96)	(.96)	(.95)	(.95)	(.94)
Model C***								
Enrollment	15,353	15,511	15,773	16,067	16,381	16,728	17,101	17,494
(Index)	(1.05)	(1.03)	(1.03)	(1.02)	(1.01)	(1.01)	(1.01)	(1.00)

*Model A assumes a constant 1984-85 ethnic mix of California Public High School graduates, constant 1985-86 participation rates (calculated as if UCSD had not redirected 1,200 qualified applicants), constant 1984-85 continuation rates, and constant 1983 ethnic eligibility rates (Black 3.6%, Hispanic 4.9%, Asian 26%, White 15.5%).

**Model B assumes a changing ethnic mix of Public High School Graduates, with Hispanics increasing from 18.1% to 32.7% of each graduating class over the space of 12 years, and Whites decreasing from 63.6 to 49.6% over the same period. It also makes the same assumptions about participation, continuation, and eligibility rates as Model A.

***Model C assumes the same ethnic mix, participation and continuation rates as Model B, but assumes that Black eligibility will increase from 3.6% to 5.5% by 1986-87, and Hispanic eligibility will increase from 4.9% to 6% by 1987-88

UCSD begins to move closer to planned enrollments after 1989-90, dropping from a high of 19% over the plan to 7% by the year 2000-01.

Model B makes the same assumptions as Model A, except that it adjusts the ethnic distribution of public high school graduates in the years to come to reflect the current breakdown of grades K-12 (Table 12). In this model, then, Hispanics gradually increase from 18.1% to 32.7% of each public high school graduating class over the next 12 years, while Whites decrease from 63.6% to 49.6% over the same period. The projections resulting from these assumptions show enough enrollment potential to fulfill the current plan until 1994-95, when potential begins to fall below planned enrollments. According to this model, the enrollment potential projected for 2000-01 is 6% below the target set by the enrollment plan--a figure which corresponds to the rough estimate of the impact of static eligibility rates on the eligibility pool that Fishlow and Parker made in their 1980 study of enrollment potential.[5]

Model C makes the same assumptions as Model B, except that it adjusts the eligibility rates of Black and Hispanic public high school graduates slightly upwards. Specifically, Model C assumes an increase in Black eligibility from 3.6% to 5.5% by 1986-87, and an increase in Hispanic eligibility from 4.9% to 6.0% by 1987-88. These adjusted eligibility rates are still well below the UC affirmative action goals for 1988, which are 8.0% eligibility for both Black and Hispanic high school graduates. These assumptions yielded enrollment potential projections that consistently meet or exceed UCSD's growth plan. As in Model A above, over time the projections of enrollment potential become closer to planned enrollments, falling from a high of 14% over the plan to exactly on the plan in the year 2000-01.

Table 12
Enrollment in California Public Schools by Grade Level
and by Racial or Ethnic Group,
1984-85, in Percents

Grade Level	Am. Ind.	Asian or Pac. Islander	Filipino	Hispanic	Black	White
Kindergarten	.6	6.0	1.8	32.7	9.3	49.6
1	.7	6.0	1.8	32.6	9.8	49.2
2	.6	6.2	1.9	32.3	9.9	49.2
3	.7	6.7	1.9	32.2	9.8	48.7
4	.7	7.1	1.9	31.5	9.6	49.3
5	.8	7.2	2.0	30.3	9.7	50.1
6	.8	7.2	2.0	29.2	9.6	51.1
7	.8	7.0	1.9	27.6	9.7	52.9
8	.8	6.6	1.9	25.5	9.8	55.4
9	.9	6.6	1.8	24.4	9.8	56.6
10	.8	6.7	1.7	23.7	10.3	56.8
11	.9	7.0	1.9	21.2	9.4	59.6
12	.9	7.5	1.9	18.8	9.0	61.9
TOTAL	.8	6.7	1.8	27.9	9.7	53.1

Source: Racial or Ethnic Distribution of Staff and Students in California Public Schools, 1984-85, California State Department of Education, 1985

Several other models (not included in this study) assumed a continuing increase in participation and/or continuation rates while adjusting ethnic distribution as in Models B and C above and holding eligibility constant. These models yielded the same basic results as the three discussed above: enrollment potential at or above planned levels. This is not surprising in light of the profound effects that participation and continuation rates have on total enrollments.

Since participation and continuation have not declined in the last eight years, the assumption that they will at least maintain their present levels for the next decade seems reasonable. Indeed, they appear likely to increase some more. For example, even though multiple filing will tend to confound short-term enrollment predictions for the next several years, the UC system received applications for the 1986-87 academic years from 2% more students than last year, slightly more than the 1.67% increase in public high school graduates projected for this June. Moreover, UCSD received the largest absolute increase in the number of applications of all UC campuses.

If the campus continues to attract students who are more likely to stay, and if the quality of undergraduate student life continues to improve, then continuation rates will probably rise some more as well.

CONCLUSIONS AND CAVEATS

Recent historical patterns of increasing participation and continuation suggest that continued low eligibility of Blacks and Hispanics probably does not pose a substantial threat to UCSD's growth plan. Indeed, even if current levels of eligibility, participation, or continuation remain the same as the ethnic profile of the state changes, the projections undertaken for this study still show the campus coming

within 6% of its enrollment target in the year 2000. Since, in the opinion of the Planning Office, some increase in eligibility, participation, and continuation rates is likely, the upshot of these exercises is that UCSD's enrollment plan appears reasonable, at least in the short run. The long run is more problematical.

Two long term implications of the results of this study are a) that undergraduate education may become more of an issue for the campus in the future, and b) that the continuation rate could turn downward. While elementary and secondary education are generally improving throughout the state, the preparation and performance of underrepresented minorities continues to be well below that of the population as a whole. Dramatic changes in this situation, however desirable, appear unlikely in the near future. Thus, an ever-increasing portion of UCSD's undergraduate students will probably be coming in towards the bottom instead of the top of the eligibility pool. Consequently, the faculty and student services sectors of the university should prepare to devote even more attention to undergraduate instruction and support than they do now.

Planners must also consider the significance of the functional relationship that exists between academic ability and continuation. Both nationally and locally, academically less qualified students tend to have higher rates of attrition from the university than better qualified students.[6] As time goes on, therefore, the admission of larger numbers of less qualified students could have a depressing effect on continuation, and thus on total enrollments.

These warnings should not detract from the generally optimistic conclusion stated earlier: that UCSD's growth targets appear achievable.

But, given the unavoidable uncertainties of the kind of projections contained in this study, it is just possible that eligibility, participation, or continuation rates will fall instead of rise. In the long run, actively promoting the academic preparation and eligibility of Black and Hispanic youth offers the university a surer foundation upon which to build than passively relying upon the shifting sands of current social and economic trends.

NOTES

1. Overbeek, Johannes. Population, An Introduction Harcourt Brace Jovanovich, Inc.: p. 1.

2. Steindorf, Jeffrey A. History and Projections of UCSD Undergraduate Enrollments, 1971-2000. Office of the Associate Vice Chancellor - Planning and Analytical Studies; UCSD, 1981: p. 121.

3. Fishlow H., Parker W. Report of the Task Group on Demographic Changes and their Implications for Enrollment. Systemwide Administration; UC Berkeley, 1980: p. v.

4. Note that the continuation rates for UCSD in Figure 2 and Table 4 do not match. This is because the calculations were made slightly differently. The rates reported for UCSD in Figure 2 are based on quarter-by-quarter information whereas the rates in Table 4 are based upon annual data only; we do not have easy access to quarter-by-quarter information on the other general campuses. Thus, the rates for UCSD in Figure 2 are more accurate than those in Table 4, but are not directly comparable with the continuation rates calculated for the other campuses. As noted in the text, despite the differences in method, the general trend is the same.

5. Fishlow H., Parker W.: p. 29.

6. Morrell, Darlene. A Report on Undergraduate Retention Rates at UCSD. Office of the Registrar; UCSD, 1986: pp. 16, 20-23.

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